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INDUSTRY OUTLOOK

COMPILED BY PAUL PROCTOR

EDUCATION VIDEO

IMPROVED PILOT AWARENESS of controlled-flight-into-terrain hazards and prevention strategies are the aims of a new Flight Safety Foundation videotape. The 33-min.-long tape, created by Arlington, Va.,-based FSF and 28 industry cosponsors, details three fatal CFIT accidents and demonstrates how a FSF-developed CFIT checklist could have helped prevent them. Statistics indicate more than 8,300 people have been killed in CFIT accidents since 1958.

ENSTROM GAINS

ENSTROM IS EXPANDING its South American military presence with the delivery of 12 F28F helicopters to the Colombian air force. The piston-powered, three-place helicopters will be used for training and are accompanied by a Frasca International F28F flight simulator. Enstrom, based in Menominee, Mich., also has sold training helicopters to the militaries of Chile and Peru.

CLOUD SANDWICH

SIMULTANEOUS RADIOMETER MEASUREMENTS by satellite, three specially instrumented aircraft and ground stations should help improve weather forecasting on cloudy days. The aircraft, which fly in an approximately stacked formation directly over ground sensor arrays, consist of a NASA ER-2 high-altitude research jet soaring at 65,000 ft., a Grob Egrett cruising at about 43,000 ft. and a de Havilland Twin Otter flying at 1,500 ft. By comparing about 75 hr. of vertically aligned ground, flight and satellite data, scientists at Sandia National Laboratories hope to better understand the role of clouds in warming and cooling the Earth.

MIGRATING BLAST DATA

BOMB-PROOFING DESIGNS AND TECHNIQUES developed by the U.S. military to protect its structures should be adapted to civil use to help combat domestic terrorism, according to a report from the Washington-based National Research Council. The technology transfer should include details on increasing the survivability of building subsystems, such as communications and ventilation, that could be critical to occupant survival after a blast. Reasonable blast hardening would add about 5% to construction costs.

FREEZING OUT CORROSION

NEW MAPS OF LIQUID SURFACES with features as small as 200 angstroms could be key in the battle against corrosion. To obtain the detailed topographic images, researchers at Lawrence Berkeley Laboratory, Berkeley, Calif., "flew" a modified atomic force microscope at an altitude of 200 angstroms over condensation formed on mica. The data will help scientists learn how water films alter the surface properties and reactivity of solids, according to Miquel Salmeron, lead researcher. One early discovery: at certain humidities, water condenses first by forming a single atom-thick layer of room temperature ice.

RUNWAY SUPPORT CHECKER

A NEW DEVICE TO MORE RAPIDLY EVALUATE the strength of underlying soils at contingency airfields has been developed and deployed by the U.S. Army Corps of Engineers, Vicksburg, Miss. The dual-mass dynamic cone penetrometer uses a heavy hammer to penetrate and test the high-strength, granular layers directly beneath pavement and a lighter hammer to evaluate softer subgrade soils. Man-portable and gravity-powered, the DMDCP will profile soil strength to depths of about 36 in., according to Steve Webster, civil engineer.

SPIN CONTROL

A SIMPLE SET OF FOLD-DOWN AERODYNAMIC stabilizer plates for litters has been proposed to minimize downwash-generated spin during helicopter rescue hoists. The spring-loaded, underside-mounted plates, which become vertical when deployed, were proven effective in limited 1/7-scale model tests at NASA's Langley Research Center, Hampton, Va. The plates can be latched flat for storage or normal litter use. Spinning litters complicate the work of rescue crews, cause patient discomfort and can even eject patients.